

REMARKS

These remarks are submitted in reply to the Office Action dated July 12, 2007. Applicant respectfully requests reconsideration and further examination of the patent application under 37 C.F.R. § 1.111.

I. Claims 1 - 3, 23 - 24, 26-27 and 30-31 were rejected under 35 U.S.C. 103(a) as being unpatentable over Ward et al. (USP 5,701,294) in view of Tong et al. (US Publication 2001/0038630 AI). Based on the remarks herein, Applicant respectfully requests that the Examiner reconsider and withdraw all outstanding rejections.

Independent claim 1 has been amended to include the limitation of communicating the class type of the user to a MAC scheduler; and the MAC scheduler scheduling all transmission between the base station and the user by assigning transmission frequency slots and transmission time slots to the user, wherein a number of frequency slots assigned to the user per time slot is based on the class type of the user.

This element was included in claims 10. Claim 10 was rejected under 35 U.S.C. 103(a) as being unpatentable over Ward et al. in view of Tong, and in further view of Gitlin et al. (USP 6,064,662). The office actions stated that regarding claims 10, 12-13, 17-22, the combined method of Ward and Tong discloses all the aspects of the claimed invention set forth in the rejection of claim 1 above, except fails to explicitly show the method of claim 1, further comprising: communicating the class type of the user to a MAC scheduler; the MAC scheduler scheduling all transmission between the base station and the user by assigning transmission frequency slots and transmission time slots to the user, wherein a number of frequency slots assigned to the user per time slot is based on the class type of the user, wherein the class type of

each of the users determines a priority in the MAC scheduler assignment of predefined transmission frequency slots and transmission time slots to the users.

However, the OA stated that Gitlin discloses a method and system to schedule data transmission for users by assigning frequency bands on a time slot-by-slot basis, wherein the scheduling is based on the data speed demand of users and medium availability (see col. 4, lines 54-67 and col. 5, lines 1-13) and therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the dynamic user bit rate allocation of a TDMA system based on the channel quality of Ward with the teaching of scheduling data transmission for users based on the individual user needs and medium availability in Gitlin such that a scheduling mechanism (actual positioning/priority of the various speed users) will be used to allocate frequency and time slots to users which is based on the combination type, as disclosed in Ward, assigned to a user. The motivation to do so would be to perform optimum frequency and time slots allocation based on the associated combination type associated with the user.

Applicant respectfully submits that the MAC scheduler used in the WLAN network of the present invention is significantly distinct from the scheduling mechanism of Gitlin. The present application provides in paragraph 10 that “[t]he MAC scheduler schedules all transmission between the base station and the user by assigning transmission frequency slots and transmission time slots to the user, wherein a number of frequency slots assigned to the user per time slot is based on the class type of the user. The number of frequency slots assigned to the user per time slot can be further based on real-time system traffic load between the base station and the plurality of users. The number of frequency slots assigned to the user per time slot can be further based on a quality of service associated with the user.

The MAC schedule is unique to a WLAN and would not be utilized in the communication systems used in Gitlin, such as the wireless, satellite, personal communications, and cellular communications systems. The MAC provides the intelligence in the present invention to enable assigning a class type to the user based upon the transmission link quality and adjusting a number of sub-carriers comprising the multi-carrier communication signal and one or more of a number of timeslots, modulation rate, coding rate and transmit power allocated to select sub-carrier(s) of the one or more sub-carriers comprising the multi-carrier communication signal for transmission with the user based upon the class type. Again, the scheduler of Gitlin could not accomplish this and could not be modified by teaching of any of the combined cited art to accomplish this.

Based on the foregoing, Applicant respectfully submits that the rejection of independent claim 1 and claims that depend therefrom has been traversed.

CONCLUSION

In light of at least the foregoing amendments and remarks, Applicant respectfully submits that claims 1 – 9 and 11 - 29 are in condition for allowance and such action is earnestly solicited.

The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.

Please charge any shortages and credit any overcharges to our Deposit Account number 50-4238.

Respectfully submitted,

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